

# Ikegami

## **CDA-141N and CDA-201N**

**VERSATILE, DESK-TOP TYPE HIGH  
RESOLUTION COLOR MONITORS!**



## GENERAL

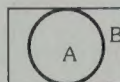
The CDA-141N/201N desk-top type high quality color monitors are offered to complement the entire Ikegami color medical camera line, and are available in two different screen sizes; One is 14" (13V) configuration for model CDA-141N, and another is 20" (19V) for model CDA-201N. Both configurations are operated at either NTSC signal or RGB signal by switch selection, and

incorporate In-Line type black matrix P22 phosphor CRT with 0.43mm dot trio pitch and state-of-the-art electronics, giving 600 lines horizontal resolution at RGB operation or 400 lines at NTSC. Audio capability is optional. Other noteworthy features include ease of operation and high reliability. This monitor conforms to safety requirements for medical applications.

## SPECIFICATIONS

<b>Power Requirement</b>	: AC 120V $\pm 10\%$ , 60Hz
<b>Power Consumption</b>	: CDA-141N: Approx. 110W CDA-201N: Approx. 120W
<b>Ambient Temperature</b>	: 0 ~ +40°C
<b>Weight</b>	: CDA-141N: Approx. 20 kg CDA-201N: Approx. 33 kg
<b>Picture Tube</b>	: In-Line type, Black Matrix, P22, 0.43mm Dot Trio Pitch CDA-141N: 14" (13V) CDA-201N: 20" (19V)
<b>Video Input Level</b>	: 1) VBS 1.0Vp-p or VB 0.7Vp-p 2) RGB 0.7Vp-p
<b>Sync Input Level</b>	: 1.0Vp-p (Negative)
<b>Input Impedance</b>	: 75 $\Omega$ ( $\pm 5\%$ ) or high impedance
<b>Signal I/O Connectors</b>	: VBS or VB: BNC RGB: 10 pin Sync: BNC or 10 pin VTR: 8 pin
<b>Sync Lock Range</b>	: Horizontal: 15.734kHz $\pm 0.3$ kHz Vertical: 59.94Hz $\pm 0.5$ Hz

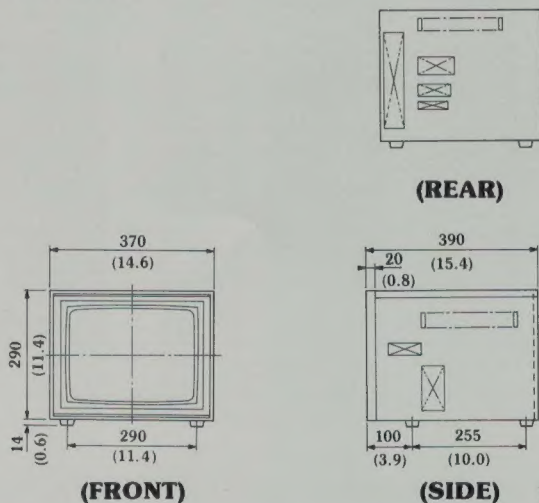
<b>Horizontal Resolution</b>	: 600 TV lines or better (RGB) 400 TV lines or better (NTSC)
<b>Misconvergence</b>	: CDA-141N: Zone A less than 0.5mm Zone B less than 0.8mm CDA-201N: Zone A less than 0.7mm Zone B less than 1.0mm
<b>Frequency Response</b>	: RGB system: 60Hz ~ 6MHz $\pm \frac{1}{3}$ dB NTSC system: Y 60Hz ~ 4MHz $\pm \frac{1}{3}$ dB C 60Hz ~ 0.5MHz $\pm \frac{1}{3}$ dB
<b>Brightness</b>	: CDA-141N: 300 NIT or better CDA-201N: 180 NIT or better (at the center of screen with window pattern)
<b>Scan Size</b>	: 5% overscan



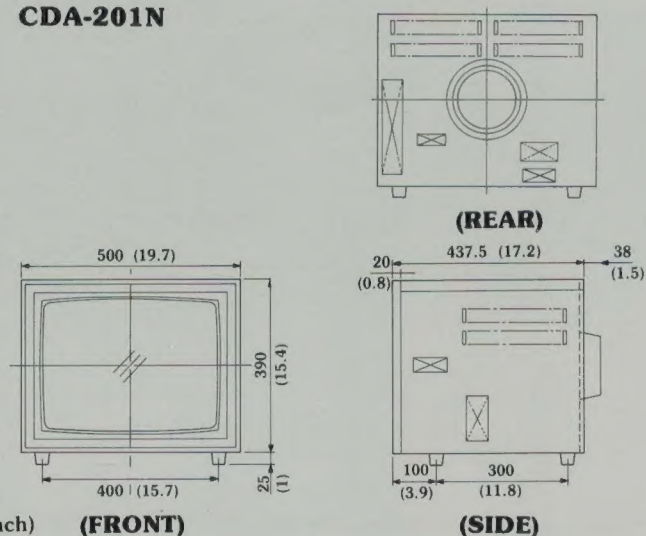
Design and specifications are subject to change without prior notice.

## DIMENSIONS

### CDA-141N



### CDA-201N



# Ikegami

## IKEGAMI ELECTRONICS (U.S.A.) INC.

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<b>MIDWEST OFFICE:</b>	747 CHURCH ROAD, UNITS C4 & C5, ELMHURST, ILL. 60126 Phone: (312) 834-9774
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**CDA-201NM/141**



## Section 1.0 SPECIFICATIONS

### 1.1 General

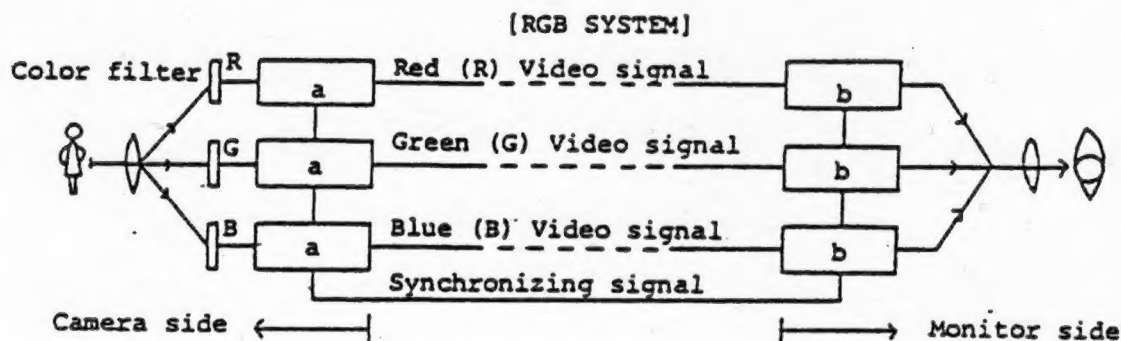
This monitor is a high resolution color monitor using a high quality CRT, which provides RGB/NTSC switchable operation.

The color decoder has a luminance and chrominance comb filter circuit for high resolution NTSC signal image.

#### RGB System/NTSC System

##### [RGB System]

When this monitor is switched to RGB operation mode, the three color signals of red, green and blue obtained by TV camera are directly reproduced on the monitor, providing better resolution and stability.

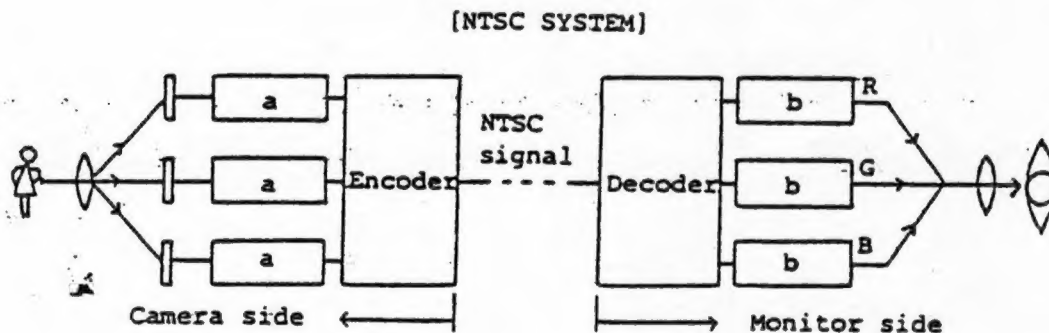


a --- Light to electronic signal transference

b --- Electronic signal to light transference

##### [NTSC System]

NTSC system is a world wide system used in broadcasting, VTR's, etc. This system has less definition than RGB system has, but it provides for simple signal transmission.



a --- Light to electronic signal transference

b --- Electronic signal to light transference

## 1.2 Features

- Simple and easy operation

The quantity of required function adjustments are readuced to a minimum for simple and easy operation.

- High reliability

Simplification of circuit and reduction of power consumption are achieved by utilizing an In-line Gun CRT. And the use of IC's assures higher reliability.

- High stability

Stable picture can always be obtained irregardless of the power voltage fluctuation or the brightness changes, because the electrode voltage of the CRT is regulated.

- Modular construction for easy maintenance

Plug-in printed circuit board utilized.

### 1.3 Specifications

Item		CDA-141N	CDA-201N
1	CRT	14 inch high resolution, in-line gun.	20 inch high resolution, in-line gun.
2	Signal input level	RGB : 0.7Vp-p (Allowable ; 0.5~1.5Vp-p) NTSC : VBS 1.0Vp-p(Allowable ; 0.5~1.5Vp-p) VB 0.7Vp-p(Allowable ; 0.5~1.5Vp-p) SYNC : 1.0Vp-p (Allowable ; 0.5~5.0Vp-p) negative polarity	
3	Signal input impedance	Video and Sync : 75 ohm $\pm 5\%$ or high impedance [Audio : 620 ohm $\pm 5\%$ or high impedance] change by switch	
4	Signal I/O connector	RGB Video, SYNC : 10P round connector NTSC Video, SYNC : BNC connector [AUDIO : 10P round connector, pin jack or 8P square connector(for VTR)]	
5	Power input	AC 100/120V $\pm 10\%$ 50/60HZ Voltage is selected by connection change.	
6	Power consumption	110W	120W
7	Ambient temperature	0 ~ +40°C	
8	Weight	20Kg	33Kg
9	Lock in range on Synchronization	Horizontal : 15.734KHZ $\pm 0.3$ KHZ Vertical : 59.94HZ $\pm 5$ HZ, -0HZ	
10	Scan size	5% overscan	
11	Video frequency response	RGB system : 6MHZ+1dB, -3dB NTSC system : Y ; 4MHZ+1dB, -3dB C ; 0.5MHZ+2dB, -3dB	
12	Brightness (Rating)	300 NIT	180 NIT
13	Convergence	Zone A : 0.6mm Zone B : 1.0mm	Zone A : 1.0mm Zone B : 1.5mm
		Zone A : Within circle having a diameter equal to picture height. Zone B : Display area outside Zone A.	
14	Resolution	Horizontal : 600 TV lines ---- RGB 400 TV lines ---- NISC Vertical : 350 TV lines ---- RGB, NTSC	

## 2.1. Precautions in installation

### 2.1.1. Inspection after unpacking

After unpacking, be sure to check the casing for secure installation and various parts for damage prior to switching power on.

Also check that a 3A fuse is in the fuse holder at the rear panel of the casing.

### 2.1.2. Precautions in installation

#### A. Undesirable Places for Installation

- Extremely hot or cold place, humid place
- Place exposed to direct sunlight
- Dusty place
- Place with much vibration
- Place close to a device generating much magnetism
- Place not well ventilated

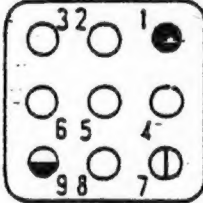
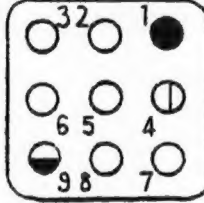
#### B. Precautions after Installation

- Do not close or block the ventilation slits at the top and bottom and the sides of the monitor, or place anything heavy on it.
- Make sure that anything inflammable, easy to melt, water, or metal will not get into the monitor.
- Keep the power cord free of damage. A damaged power cord can cause power leakage and electric shock.
- If the monitor is not used for a long time, unplug the power cord from the electrical outlet for safety. (Be sure to grip the plug when disconnecting the power cord.)

## 2.2 Precautions in Operation

100V AC outlets should be normally used for operating the monitor.

(In case 120V operation, connection of voltage selector in the monitor is as follows;)

Rated voltage	100V	120V
Voltage range	90 ~ 110V	108 ~ 132V
Connection pin insertion		

- Brown wire
- ⊕ Blue wire
- ⊖ Green wire

(Refer to 4.2.2 for the connector position.)

- The monitor has high-voltage parts inside, which are very dangerous if carelessly touched. Be careful not to put your hand inside the monitor set when power is on. If the monitor needs repair, have it repaired by a qualified service personnel.

- Some of the parts used in the monitor are important for safety. When any of them must be replaced, be sure to use the same one. If a different part is used, it can aggravate the trouble or result in a fire.

- This monitor has two kinds of fuses, one for the AC line (over the chassis in the back) and the other for the +B line (on the DEF circuit board).

Be sure to use fuses of the following ratings.

AC line fuse: 100V to 120V AC - - - 3A (Back of the set)

+B line fuse: 1.5A (DEF circuit board) for CDA-201N

1.0A (DEF circuit board) for CDA-141N

- This monitor must be warmed up for about 30 minutes after switching power on to ensure stabilized operation and performance.

- At the same time as power is switched on, the CRT and its peripheral parts are automatically degaussed. If the purity has aggravated during operation, manually degauss with the DG switch on the side panel.

- If two or more monitors are used together side by side to generate different signals respectively, the images may appear unsteady or be otherwise affected due to non-synchronous interference if the signals are not synchronized between the monitors. In such a case, separate the monitors by more than 50cm apart from each other.

- If bridging is desired, limit the number of monitors to ten or less.

- Keep the ground terminals SG and FG (at the back of the set) shorted with the short bar.

- If it is necessary to separate SG (Signal ground) and FG (Frame ground) from each other for your system configuration, remove the short bar, and use the terminal FG (Frame ground) as ground terminal.

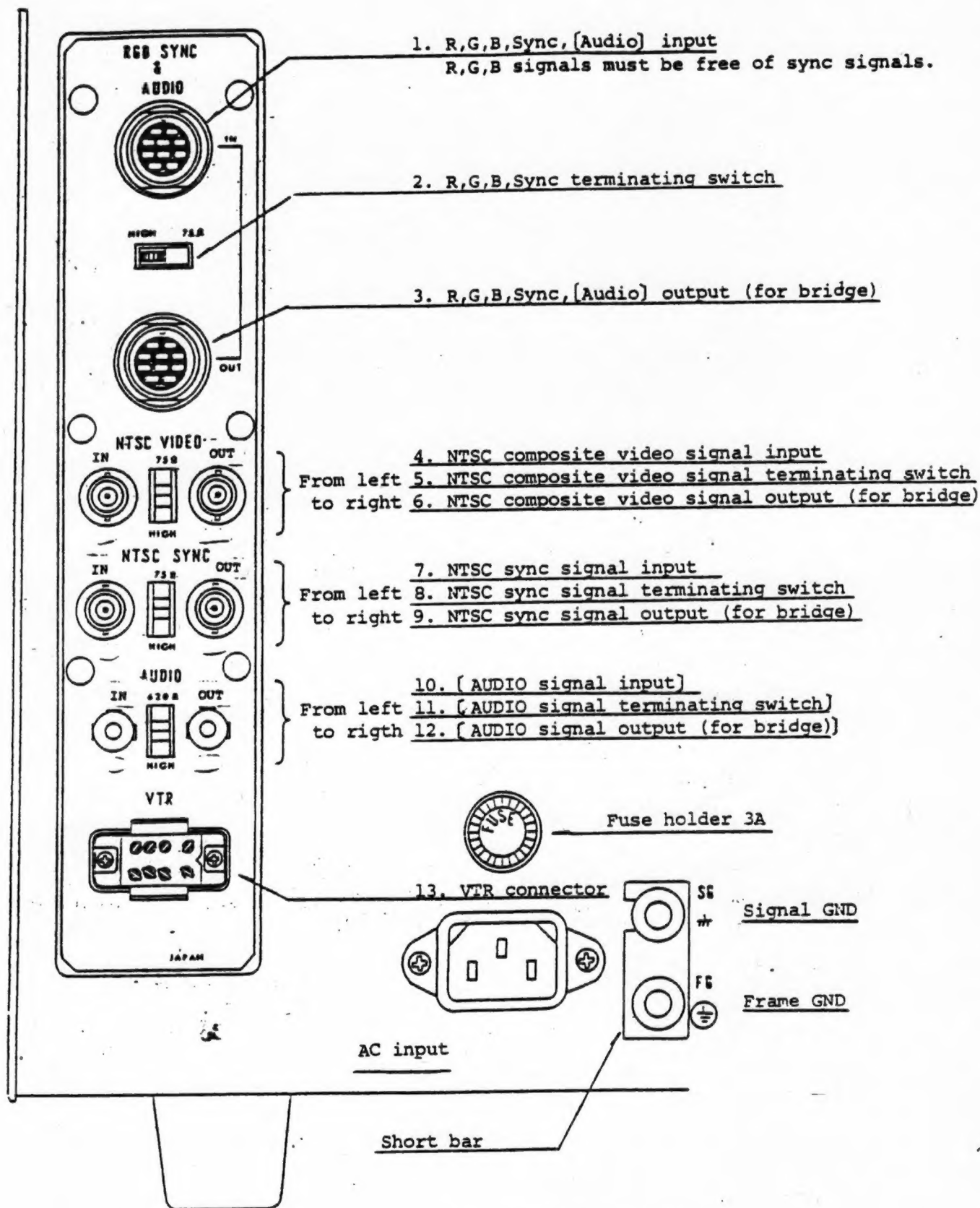
- It is recommended for safety that the frame of this monitor be grounded.

The casing of this monitor is connected to third pin of the AC plug and terminal FG (Frame ground). The frame may be grounded by connecting it to this 3 Pin AC plug. If the frame cannot be grounded in either of these ways, use the ground terminal FG (Frame ground).



## SECTION 3.0 INSTALLATION

### 3.1 Nomenclature and description of each connector



Rear panel of the monitor

- (2) RGB SYNC signal terminating switch  
 (3) RGB SYNC [AUDIO] signal output (for bridging)

Pin No.	Signal Connection	Pin No.	Signal Connection
1	R video signal input	6	-
2	G video signal input	7	[Audio signal input]
3	B video signal input	8	[Audio signal ground]
4	Sync signal input	9	Video signal ground
5	-	10	Sync signal ground

Plug: Hirose RM15TPD-10P

- Both R, G, B video signals and sync signal shall conform to NTSC standards, and R, G, B video signals shall be without sync signal. A video signal with sync (VS: video and sync) causes a misclamp in the circuits, and thus disturbs the white balance.

(2) is the R, G, B video and sync signals terminating switch.

- (4) NTSC composite video signal input  
 (5) NTSC composite video signal terminating switch  
 (6) NTSC composite video signal output (for bridging)

A video signal input shall be an NTSC composite video signal (VBS-video, burst, sync) or nonsynchronized video signal (VB-video, burst). (If a VBS signal is applied, the monitor is synchronized by this signal only. If a VB signal is applied, however, an external sync signal is necessary for synchronizing the monitor as mentioned below.)

- (7) Sync signal input  
 (8) Sync signal terminating switch  
 (9) Sync signal output (for bridging)

A sync signal is always necessary if the input video is VB. If the input video is VBS, a sync signal may also be applied to synchronize the monitor. Either of these sync modes can be selected with the NTSC SYNC select switch on the side control.

The external sync signal must be synchronized with the VBS (or VB) mentioned above, but do not need to be synchronized with R, G, B signals.

- (10) [Audio signal input]  
 (11) [Audio signal terminating switch]  
 (12) [Audio signal output (for bridging)]

[Note ; Audio signal terminating switch is (11) only.]

This VTR connector is used exclusively for reproduction.

Pin No.	Signal Connection	Pin No.	Signal Connection
1	[Audio signal input]	5	[Audio signal input ground]
2	Video signal input	6	Video signal input ground
3	-	7	-
4	-	8	-

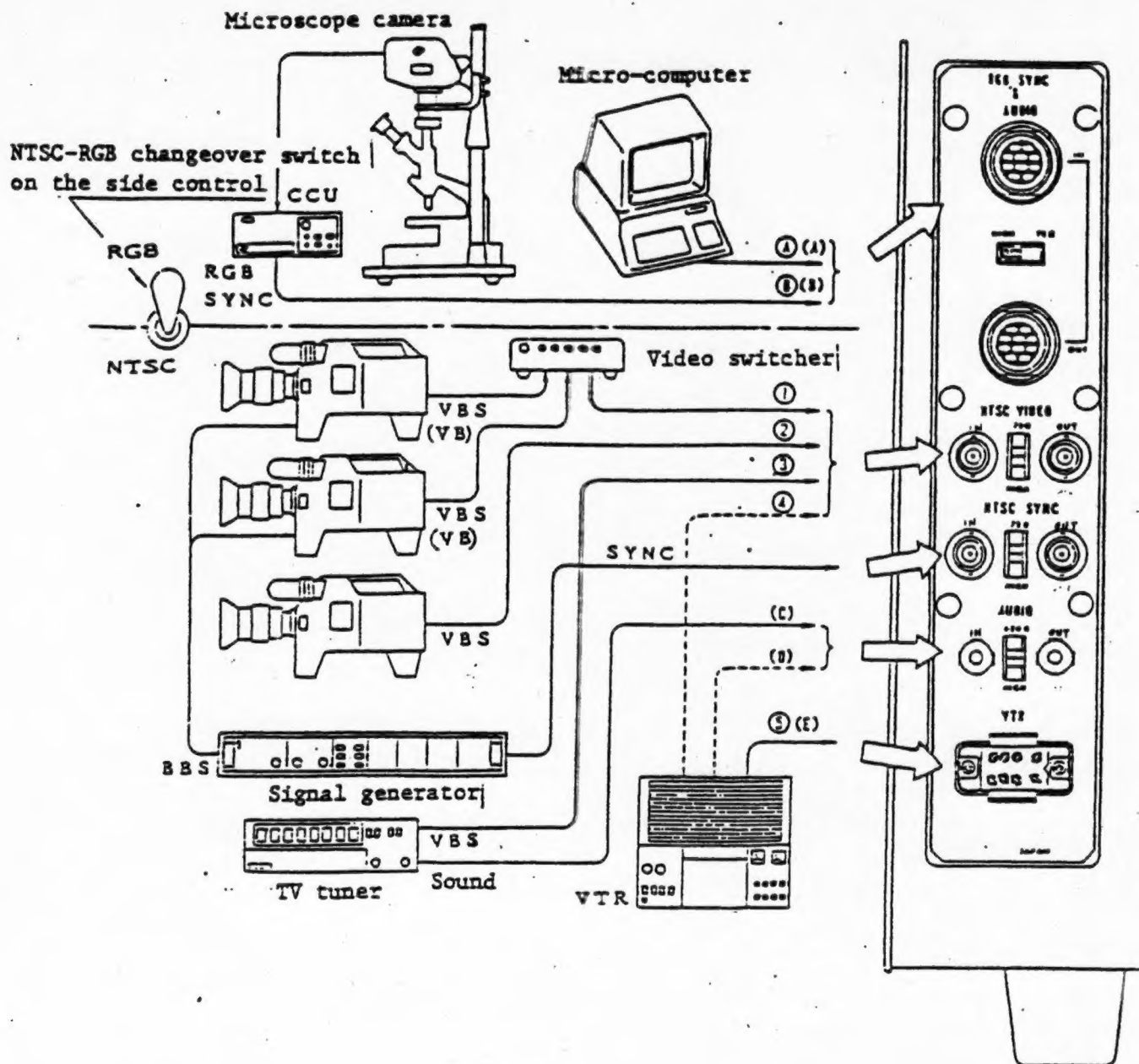
Plug: Hirose P-1308-CTA

Use terminal (6) for bridging video signals input to the VTR connector, and use terminating switch (5) for terminating them.

- Termination is important for proper receiving of signals.

If two or more monitors are bridged, terminate signals in the final monitor. In other cases, be sure to terminate them in every monitor.

- For the rated levels and permissible ranges of signals to be applied to the individual input terminals, refer to specifications in Section 1.0.



\* Video signal

RGB mode ..... 1 network of ④ or ⑤  
 NTSC mode .... 1 network of ①, ②, ③, ④ or ⑤

It can be selected by the RGB-NTSC changeover switch on the side control panel to be reproduced after connecting signals of both modes at same time.

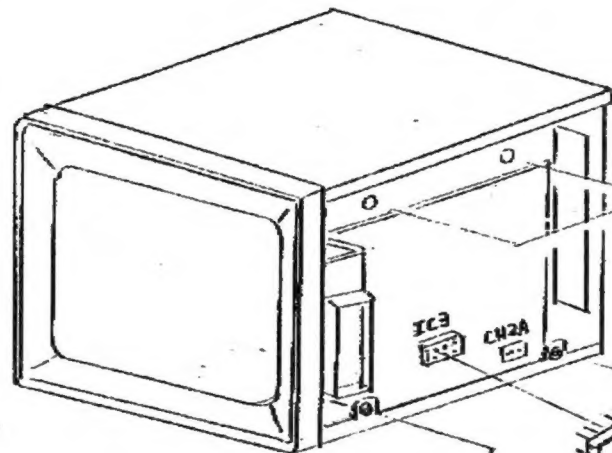
\* Audio signal ... 1 network of (A), (B), (C), (D) or (E)

Audio signals are not concerned with RGB-NTSC changeover switch.



CDA-141N/201N

SP. 取付要領書

IC3  
AN5250SP取付金具  
M4-617012-1ASP ワイヤ-ハ-ネズ #38  
ST-603753-1

TO G0ESTO CN2A

SP  
166EP06A-177411ネジ  
BTB 3x8A-177411ネジ  
BTB 3x8

## SPの取付要領手順

- ▽ ハイドケース (VIDEO側) を取りはずす。
- SP. 取付金具固定
- SP. 取付
- SP. のワイヤ-ハ-ネズの一端を CN2A へ接続
- IC3 を挿入
- 音声の確認
- ▽ ハイドケース取付。

ハイドケース

ネジ  
M4x8

注) CDA-141N の場合、TOP cover を取りはずしてから作業性がよい。

